





**U.S. POSTAL SERVICE  
Washington, DC 20260**

**Handbook EL-812,  
Hazardous Materials**

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## I. Introduction

This is a guide to the proper handling of hazardous materials through the U.S. mails. It is an educational and safety tool to be used in conjunction with postal guidelines. Although no pamphlet can replace common sense, it can be to your advantage to keep this guide handy.

## II. Title 18

It is a federal crime, punishable by fines and imprisonment, to place in the mails any ". . . natural or artificial article, composition, or material which may kill or injure another, or injure the mails or other property . . ." [18 U.S.C. Section 1716(a)]. This statute allows the Postal Service to permit the mailing of some injurious articles under regulations prescribing conditions of preparation and packaging [18 U.S.C. Section 1716(b)]. (See Publication 52, *Acceptance of Hazardous, Restricted or Perishable Matter*.)



### III. Postal Regulations

The Postal Service will accept for mailing, in limited quantities, many potentially hazardous materials which are not outwardly or of their own force dangerous or injurious to life, health, or property. The conditions of preparation and packaging under which such materials are acceptable are stated in *Domestic Mail Manual* (DMM) 124 and in Publication 52, *Acceptance of Hazardous, Restricted or Perishable Matter*. Particular conditions applicable to mailings of hazardous materials to foreign addresses are stated in the *International Mail Manual* (IMM).

## IV. What Are Hazardous Materials?

Postal regulations divide hazardous materials into 16 commonly used classifications. Following is a summary of the conditions under which many hazardous materials may be accepted for mailing. Also see labeling and packaging requirements, pages 14 and 15. (See Caution below for additional information.)

Classification and Example	Domestic Transportation (S = Surface, A = Air)
Explosives (fireworks)	Nonmailable (S, A)
Flammable liquids— Flashpoint 21-99°F (cigarette lighter fluid)	1 qt. metal 1 pt. other (S) Nonmailable (A)
Combustible liquids— Flashpoint 100-200°F (kerosene)	1 gal. (S, A)
Flammable solids (highway flares)	25 lbs. (S) Safety matches only <sup>2</sup> (A)
Oxidizers (bleach)	1 pt. liquid, 25 lb. solid (S) When specifically permitted <sup>2</sup> (A)
Corrosive liquids (acid solutions)	1 pt. (15% solution or less) (S) When specifically permitted <sup>2</sup> (A)

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<b>Classification and Example</b>	<b>Domestic Transportation (S = Surface, A = Air)</b>
Corrosive solids (acid solids)	25 lbs. (S) When specifically permitted <sup>2</sup> (A)
Flammable compressed gas (aerosol paint)	27.7 oz. (S) Nonmailable (A)
Nonflammable compressed gas (foam)	27.7 oz. (S, A)
Poisons, Class A (phosgene)	Nonmailable (S, A)
Poisons, Class B <sup>1</sup> (arsenic)	8 oz. (S) 8 oz. <sup>2</sup> (A)
Carcinogens (benzidine)	8 oz. (S) 8 oz. <sup>2</sup> (A)
Edologic agents (biological materials)	4 liters (S) 50 milliliters <sup>2</sup> (A)
Radioactive material (radium)	See Pub. 6, <i>Radioactive Materials</i> (S, A)
Irritating materials (tear gas)	Nonmailable (S, A)
Carbon dioxide (dry ice <sup>3</sup> )	Mailable (S) Mailable with specific marking (A)

<sup>1</sup>Only mailings between specified senders and addressees are acceptable.

<sup>2</sup>With Shipper's Certificate as qualified by Publication 52.

<sup>3</sup>Shipper's certification not required for air transportation when 5 lbs. or under or when used as a refrigerant for materials used for diagnostic or treatment purposes.

**Caution:** This is a general overview of hazardous materials regulations. Not all corrosives, compressed gases, Class B etiologic agents are acceptable under any of preparation and packaging because of hazard they present (e.g., nitric acid can be an oxidizer, corrosive, and/or a poison on its solution or form)—is never acceptability of any questionable material determined by consulting *Domestic* 1124 or Publication 52 or by obtaining ruling from your nearest Rates and Classification Center or the Office of Classification Administration, Washington, DC 202

## **V. Acceptance/Refusal Procedures**

- A.** The mailer is responsible for what is being mailed and the way it is packaged and marked.
- B.** When a mailer seeks advice about the mailability of particular matter, or questionable matter is to be mailed, the acceptance clerks, acting on behalf of the postmaster, are to refer the mailer to DMM 124 or Publication 52, or any other available mailability guidelines (see "References"). Technical questions may be referred to the nearest Rates and Classification Center.
- C.** Acceptance clerks, acting on behalf of the postmaster and under the direction of postal regulations, may decide what is and is not mailable and may refuse to accept hazardous material. The Office of Classification and Rates Administration is available to review these decisions.
- D.** Mailers are responsible for complying with other federal laws concerning items which may be mailable, e.g., drugs, guns, plants. Clerks should not give advice on these, but should refer mailers to the administering agency.
- E.** Matter believed to be hazardous and nonmailable that has entered the mails should be withheld from dispatch and delivery and be immediately reported to the Inspection Service.

**F.** If the mailer desires a review of a decision, the postmaster should refer a sample or complete statement of the facts to the Recorder, U.S. Postal Service, Washington, DC 20260-6101.

## **VI. Shipper's Certificate Requirement**

**A.** When mail containing hazardous material is received at a dispatch point, for transportation by air, a clerk must:

1. Examine the parcel and check labeling.
2. Verify that the shipper's certificate is complete, in triplicate.
3. Make sure the shipper's certificate has been certified by the mailer.
4. Make sure the shipper's certificate clearly identifies the parcel (as required by Publication 52 and Chapters 2 and 3 of the IMM).

**B.** The shipper's certificate must be prepared in accordance with Department of Transportation regulations. These regulations apply to all parcels containing a restricted item for air transportation and require a particular marking or warning label on each parcel.

**C.** Generally, parcels containing more than 5 lbs. of dry ice (carbon dioxide, solid) that are eligible for air transportation (see page 5) must have an attached shipper's certificate. However, when more than 5 lbs. of dry ice is used as a refrigerant preservative for material to be used for diagnostic or treatment purposes, a shipper's certificate is not required.

## **VII. Handling Suspected Hazardous Materials**

Listed below are some common sense guidelines for the proper handling of suspected hazardous materials.

- A.** Always be alert for labeling. Labels can indicate the presence of hazardous materials and precautions to take.
- B.** Do not throw, drop or slide articles that are believed to contain hazardous materials.
- C.** Transport hazardous materials in reliable carts.
- D.** Store hazardous materials in an isolated area away from work traffic flows.
- E.** Separate and store radioactive materials at least 10 feet apart.
- F.** Separate the following materials during transport and storage:

- Corrosives
- Flammable Solids
- Oxidizers
- Organic Peroxides



- G.** Place hazardous articles on the top center of a cart and secure before moving cart.
- H.** Never leave hazardous materials unattended.
- I.** If a hazardous article is leaking or broken, follow the emergency guidelines listed on pages 12 and 13.

## **VIII. Emergency Procedures for Large or Extremely Hazardous Spills**

- A.** Remove injured or contaminated persons; move victim(s) to fresh air; wash exposed body parts; call for emergency medical care.
- B.** Avoid inhalation. Do not touch material or walk into area of vaporized or spilled materials.
- C.** Immediately isolate area and restrict entry. Stay upwind or away from vapors.
- D.** Contact designated employee(s) (see page 13):

### **Facility Hazardous Material Spill and Leak Plan**

Designates personnel who will determine:

1. The nature and hazards of the contaminant.
2. Protective equipment required.
3. Clean up and disposal requirements.
4. Special precautions and other actions.

If qualified personnel are unavailable, call the Fire Department and CHEMTREC (800-424-9300)

## **IX. Emergency Procedures for Small Spills and Leaks**

Wash affected areas; avoid further contact or  
inhalation. See medical help if necessary.

Wear protective equipment, i.e., gloves, goggles,  
or apron, as needed.

Stop leak, if possible, without risk.

Place leaking package in appropriate con-  
tainers for further handling or isolate.

Consult designated employee(s) for further  
handling instructions.

**Appropriate Numbers:**

**University-Designated Employees**

Person(s) to Handle Material: \_\_\_\_\_

Local Fire Department: \_\_\_\_\_

Emergency Service: \_\_\_\_\_

Environmental Inspectors: \_\_\_\_\_

(24-Hour Number)

EMTREC 800-424-9300

University Superintendent: \_\_\_\_\_

Facilities Manager: \_\_\_\_\_

## **X. Packaging**

**A.** Packaging, including containers, cushioning, closures and reinforcement, must, at a minimum, meet the requirements of DMM 121. Basically, this means that the weight of the contents must not exceed the rating of the container. For instance, not more than 20 lbs. should be in a 175 lbs. test fiberboard box.

**B.** Cushioning must be sufficient to protect against breakage and must be sufficient to absorb the contents in case of leakage.

**C.** Inadequate closure and reinforcement causes 65% of all package failures. Pressure sensitive filament tape should be used for reinforcement. If other packaging tape is used, it must be at least two inches wide. A screw top closure must require at least 1 to 1½ turns to open and preferably should be reinforced with plastic tape. Friction closures (such as paint cans) are unacceptable without reinforcing clips or rings.

**D.** Effective handling of hazardous materials requires good packaging to protect customers, employees, equipment, and other mail.

## **XI. Labeling**

- A.** Legible and appropriate marking of hazardous material is important.
- B.** Both the delivery and return address must appear on every parcel and must be large enough to be readable at arm's length.
- C.** The contents of parcels of hazardous materials must be plainly stated on the outside of the parcel. The only exception is parcels containing controlled substances. (See DMM 124.)
- D.** Diamond-shaped, hazardous material warning labels are not required.
- E.** With few exceptions, a shipper's certificate is required on hazardous material which may be sent by air transportation.

## **XII. Air Transportation**

**A.** A transfer clerk must handle air mail hazardous material as an outside piece. The material must be tendered to an air carrier at least two hours before the scheduled departure. The material must be labeled showing the name, type, and quantity of the substance. Air carrier personnel must be notified of the hazardous material tendered.

**B.** When hazardous material is accepted for air dispatch, remove one copy of the shipper's certificate and attach it to the airline pay document, hand-stamped, **Hazardous Material**. If the material is refused, endorse the parcel, "Refused for air transportation (name of airline)," and create a refusal irregularity. The refused parcel, or other hazardous material not meeting the requirements for air dispatch, must be transported by the most expeditious surface routing.

## **Appendix**

### **Rates and Classification Centers**

#### **Eastern**

Rates and Classification Center  
Office of Classification and Rates Administration  
1845 Walnut Street  
Philadelphia, Pennsylvania 19196-9599  
PEN: 496-6164

#### **Northeast**

Rates and Classification Center  
Office of Classification and Rates Administration  
1633 Broadway  
New York, New York 10095-9599  
PEN: 330-4169

#### **Central**

Rates and Classification Center  
Office of Classification and Rates Administration  
Main Post Office Building  
433 West Van Buren Street  
Chicago, Illinois 60698-9599  
PEN: 765-5290

#### **Southern**

Rates and Classification Center  
Office of Classification and Rates Administration  
1407 Union Avenue  
Memphis, Tennessee 38165-9599  
PEN: 722-7576

**Western**

Rates and Classification Center

Office of Classification and Rates Administration

850 Cherry Avenue

San Bruno, California 94096-9599

PEN: 742-4320



## References

### Postal Service Publications

*Domestic Mail Manual*, Part 124, Nonmailable Matter—Articles and Substances; Special Mailing Rules.

*Handbook PO-507, Air Contracting Administrative Handbook.*

*Publication 6, Radioactive Materials.*

*Publication 52, Acceptance of Hazardous, Restricted or Perishable Matter.*

*International Mail Manual*, Chapters 2 and 3.

### Other Publications

*Code of Federal Regulations*, Title 49, Transportation, Part 100 to 177.

Available from:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, DC 20402-0001

*Air Transport Restricted Articles*, Circular No. 6-D.

Available from:

Airline Tariff Publishing Co.

Dulles International Airport  
P.O. Box 17415  
Washington, DC 20041-0415

*Hazardous Materials—Emergency Response  
Guide Book*

Available from:  
Materials Transportation Bureau  
Research and Special Programs Administration  
U.S. Department of Transportation  
Washington, DC 20590-0001

*Dangerous Properties of Industrial Materials.*

Available from:  
Van Nostrand Reinhold  
450 West 33rd Street  
New York, NY 10001-2603

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